

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF NEW YORK

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CRYOMECH, INC.

Plaintiff,

vs.

TOSHIBA CORPORATION a/k/a  
KABUSHIKI KAISHA TOSHIBA,  
TOSHIBA MATERIALS CO., LTD and  
TOSHIBA AMERICA ELECTRONIC  
COMPONENTS, INC.

Defendants.

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COMPLAINT

Civil Action No. 5:11-CV-279  
(TJM/DEP)

DEMAND FOR JURY  
TRIAL

Plaintiff, Cryomech, Inc. as and for its Complaint alleges:

**NATURE OF ACTION**

1. This claim arises under the patent laws of the United States, Title 35 United States Code and the Declaratory Judgment Act, 28 U.S.C. § 2201 authorizing a declaratory judgment in controversies arising under the patent laws.

**PARTIES**

2. Plaintiff, Cryomech, Inc. (hereinafter referred to as "Cryomech") is organized under the Laws of the State of New York and is New York Corporation, having a regular, principal and established place of business at 113 Falso Drive, Syracuse, New York 13211.

3. Plaintiff has and is making, offering to sell, selling and using throughout the United States cryogenic coolers that include cryogenic regenerator material.

4. Defendant, Toshiba Corporation a/k/a Kabushiki Kaisha Toshiba (hereinafter referred to as "Toshiba") is, upon information and belief, a corporation duly organized and

existing under the laws of Japan, with a regular and established place of business at 1-1, Shibaura 1-Chome, Minato-ku, Tokyo, Japan 105-8001 Tokyo, Japan.

5. Defendant, Toshiba Materials Co., Ltd. (hereinafter referred to as "TMC") is a corporation duly organized and existing under the laws of Japan, with a regular and established place of business at 8 Shinsugita Cho, Isogo-Ku, Yokohama 235-8522, Japan.

6. Defendant, Toshiba America Electronic Components, Inc. (hereinafter referred to as "TAEC") is a corporation duly organized and existing under the Laws of the State of California, with a regular and established place of business at, *inter alia*, 290 Donald Lynch Blvd., Marlborough, MA 01752.

7. Defendant TAEC is an authorized foreign business corporation within the State of New York with a registered agent within the State of New York.

#### **PATENTS-IN-SUIT**

8. The defendant Toshiba is the assignee and record owner of U.S. Patent 5,186,765 (the "765 patent"), issued February 16, 1993 relating to a cold accumulating material and method of manufacturing the same, a copy of which is annexed to this Complaint as Exhibit "A".

9. The defendant Toshiba is the assignee and record owner of U.S. Patent 5,449,416 (the "416 patent"), issued February 3, 1995 relating to a cold accumulating material and method of manufacturing the same, a copy of which is annexed to this Complaint as Exhibit "B".

10. The defendant Toshiba is the assignee and record owner of U.S. Patent 6,197,127 (the "127 patent"), issued March 6, 2001 relating to a cryogenic refrigerant and refrigerator using the same, a copy of which is annexed to this Complaint as Exhibit "C".

11. Defendant TMC purports to be in control of the rights to the '765 patent, the '416 patent, and the '127 patent (collectively referred to as the "Patents-in-Suit") and authorized by defendant Toshiba to manufacture, use and sell and to license others to manufacture, use and sell in the United States products covered by the claims of the Patents-in-Suit.

12. Defendant TMC lists Defendant TAEC as its US Sales Office and Defendant TAEC describes on its website that it sells Toshiba's and/or TMC's cryogenic refrigerator materials.

### **CONTROVERSY**

13. Defendants have asserted, either directly, indirectly and/or through their authorized agents, that the Patents-In-Suit related to various aspects of cryogenic coolers and regenerator materials for cryogenic coolers, are being infringed by Cryomech.

14. Defendants, either directly, indirectly and/or through their authorized agents, have confirmed their ability and willingness to file suit against Cryomech and have threatened and continue to threaten to sue Cryomech for infringement of the Patents-in-Suit.

15. Toshiba is the owner of record of the Patents-in-Suit, and TMC alleges that it is a co-owner and by agreement with Toshiba able to enforce the Patents-in-Suit.

16. TAEC has assisted Toshiba and TMC in the assertion of the patents against Cryomech by written and verbal communications and wishes to sell Toshiba and TMC products to Cryomech.

17. Cryomech has not infringed and does not infringe, either directly or indirectly, any valid and enforceable claim of any of the Patents-in-Suit, either literally or under the doctrine of equivalents. As such, a justiciable controversy exists between Cryomech and Defendants to warrant declaratory relief.

### **JURISDICTION AND VENUE**

18. This Court has subject matter jurisdiction of this action pursuant to 28 U.S.C. §§ 1331, 1337, 1338(a), 1367, 2201 and 2202 and the Patent Laws of the United States, 35 U.S.C. §1, *et seq.*

19. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391 and 1400.

20. Venue is proper in this judicial district because a substantial part of the events giving rise to the claims occurred in this district and the Defendants are subject to personal jurisdiction in this district.

21. This Court has personal jurisdiction over Toshiba. Upon information and belief, Toshiba has regularly conducted business in and directed to the Northern District of New York, including, business pertaining to the Patents-in-Suit and products purported to be covered by those patents. Toshiba owns either completely and/or in conjunction with TMC the Patents-in-Suit and has sued to enforce its patents within the United States and within the State of New York, on numerous other occasions.

22. This Court has personal jurisdiction over TMC. Upon information and belief, TMC has regularly conducted business in and directed to the Northern District of New York, including, business pertaining to the Patents-in-Suit and products purported to be covered by those

patents. TMC purports to control (along with Toshiba) the rights to the Patents-in-Suit and has threatened to enforce the patents against Cryomech by sending written communications to Cryomech at Cryomech's primary business address within the Northern District of New York.

23. Upon information and belief, the communication set forth above by TMC was done with the authorization, permission and at the direction of Toshiba.

24. This Court has personal jurisdiction over TAEC. Upon information and belief, TAEC has regularly conducted business in and directed to the Northern District of New York, including, business pertaining to the Patents-in-Suit and products purported to be covered by those patents. TMC lists TAEC as its sales office within the United States. Upon information and belief, TAEC regularly sells products within Northern District of New York. TAEC has worked with Toshiba and TMC in directly pursuing enforcement of the Patents-in-Suit against Cryomech.

25. The Defendants, and each of them, transact business in the State of New York and the claim against the Defendants as alleged herein arises out of that business activity.

26. The Defendants, either directly or through their agents, have engaged in purposeful activity in the State of New York in connection with the matter in suit.

27. Toshiba is subject to jurisdiction by virtue of the activities of its agents TMC and/or TAEC pursuant to, among other things, the parent subsidiary relationships.

28. The Defendants, and each of them, are subject to jurisdiction by virtue of the activities of their authorized agents which includes, but is not limited to, the Defendants themselves acting as authorized agents, of each other.

29. The Defendants, and each of them, have and continue to do business in the State of New York.

30. Each of the Defendants are engaged, either directly or through their authorized agents, in such a continuous and systematic course of doing business within the State of New York as to warrant a finding of its presence within this jurisdiction and within this district.

31. The Defendants, and each of them, did seek to engage, have engaged and continue to engage in business transactions and negotiations within the State of New York.

32. The Defendants, jointly and severely, manufacture and produce and direct products into the United States, including this judicial district, through established distribution channels and derive substantial revenue from intra-state and inter-state commerce.

33. Upon information and belief, the Defendants and/or one or more of the Defendants, owns, uses and/or possesses real property situated within the State of New York.

34. This Court has personal jurisdiction of each of the Defendants in that each has, among other things, directly and/or through intermediaries and/or agents, committed acts within the State of New York giving rise to this action and/or each has established minimum contacts with New York State such that the exercise jurisdiction would not offend traditional notions of fair play and justice.

35. Cryomech's manufacturing facilities are located at its primary business address, specifically, 113 Falso Drive, Syracuse, New York 13211.

36. All of the complained of regenerator materials imported into the United States and used by Cryomech have been delivered to Cryomech's manufacturing facilities located in Syracuse, New York.

37. All complained of cryogenic coolers manufactured by Cryomech with the regenerator materials alleged to infringe by Defendants have been made at Cryomech's manufacturing facilities located in Syracuse, New York.

38. All complained of sales of cryogenic coolers and regenerators have been sold and shipped from Cryomech's manufacturing facilities located in Syracuse, New York.

39. All of the Defendants communications offering to sell regenerator materials and alleging infringement of the Patents-in-Suit have been sent to Cryomech's manufacturing facilities located in Syracuse, New York.

40. All records and Cryomech employees with first hand knowledge of Cryomech's activities related to the alleged infringement are located within the Northern District of New York.

41. Defendants have repeatedly and wrongly charged plaintiff with the manufacturing and selling in the United States, including the State of New York, products which infringe Defendants rights under the Patents-in-Suit. Upon information and belief, the Defendants allegations of infringement against Cryomech have been made with the knowledge, approval and authorization of the each of the Defendants who are working together in concert and have authorized all of the acts set forth in this pleading.

**Count I - Declaration of Non-Infringement of U.S. Patent No. 5,186,765**

42. Plaintiff repeats each and every allegation contained in paragraphs "1" through "41" as if fully set forth herein.

43. Cryomech has not infringed and does not infringe, directly or indirectly, any valid and enforceable claim of the '765 patent.

44. As a result of the acts and allegations described in this complaint, there exists a justiciable controversy exists between plaintiff and the defendants as to the infringement of the '765 patent to warrant the issuance of a declaratory judgment.

45. A judicial declaration is necessary and appropriate so that Cryomech and Cryomech's customers may proceed with their respective businesses without continued threat of patent infringement from the Defendants.

**Count II - Declaration of Invalidity of U.S. Patent No. 5,186,765**

46. Plaintiff repeats each and every allegation contained in paragraphs "1" through "45" as if fully set forth herein.

47. The '765 patent is invalid for failure to meet one or more of the conditions of patentability and/or otherwise comply with 35 U.S.C. §§ 100 et seq. 101, 102, 103, 112 and 132.

48. The claims of the '765 patent were and are invalid and void because the subject matter was, *inter alia*, not novel at the time of its alleged invention.

49. The claims of the '765 patent were and are invalid and void because, *inter alia*, the differences between the subject matter sought to be patented therein and the prior art are such



that the subject matter as a whole would have been obvious, as of the earliest date that the applicants for said patent are entitled to rely upon as the date of their alleged invention, to a person having ordinary skill in the art to which said subject matter pertains.

50. The claims of the '765 patent were and are invalid because, *inter alia*, the inventors thereof were not the original or first inventor of the alleged improvements described and claimed therein and that the alleged improvements, in all material and substantial respects, were invented, known to and used by others in this country before the alleged invention or discovery, were patented and described in printed publications in this and foreign countries before the alleged invention or discovery thereof or more than one year prior to the application for said patent.

51. The claims of the '765 patent were and are invalid and void because, *inter alia*, the claims do not particularly point out the subject matter which the applicant regards as his invention and the breadth of the claims asserted by Defendants are not supported by an adequate written description that enables one of ordinary skill in the art to practice the invention as claimed.

52. Essentially the same claims granted in the '765 patent were granted in an EPO patent EP-B1-O 411 591 that claimed priority to the same Japanese patent application (JP 1-196870) as the '765 patent.

53. On April 16, 1998 Sumitomo Heavy Industries filed an opposition requesting the revocation of the EPO patent citing the following references: "C1-11 Development of Refrigerator Using Magnetic Regenerator Material (3) - Manufacture of Spherical Magnetic Particles" - Sahashi\*, Tokai\*, Rui, Ogawa and Hashimoto - *Cryogenic and Super Conductivity*

*Society Proceeding* - Autumn 1988 conference - November 20-22, 1988 (the "Invalidating Reference"). The inventors with an "\*" next to their names were listed as inventor on the '765 and '416 patents. This Invalidating Reference recites spheres of  $\text{Er}_3\text{Ni}$  formed by plasma jet; see figs 3 and 4 particles are spherical, see analysis fig.3a and table R1 from EPO decision - all particles shown are within claimed particle size and less than 5:1 ratio range.

54. The decision on appeal was handed down November 18, 2004, and the European claims were accordingly amended. The EPO found that the claims at issue in the EPO (basically, main claims in '765 and its divisional '416) were not patentable, absent a method of manufacture restriction. The claims corresponding to the current claims in the '765 patent and '416 patent were all held to be unpatentable in view of the Invalidating Reference cited by Sumitomo. Toshiba significantly amended the claims to recite additional limitations and the amended claims were allowed.

55. Toshiba could have filed for reissue or reexamination of '765 patent within the US to include the limitations required by the EPO, but chose not to do so, despite EPO determination that the claims as issued were not patentable.

56. The Invalidating Reference included five authors, two of which were listed as two of the four co-inventors of the '765 patent. Clearly, the co-inventors that were also authors of the Invalidating Reference were aware of the publication well prior to the earliest priority date of the '765 patent.

57. Upon information and belief, at no time during prosecution of the '765 patent did any of the inventors cite the Invalidating Reference to the Patent Office. Upon information and belief, given that two of the four co-inventors of the patent knew of the paper and its materiality

to the patentability of the inventions claimed, their failure to disclose their own highly relevant paper was an intentional deception of the Patent Office.

58. In addition to the Invalidating Reference, two of the listed co-inventors of the '765 patent were also co-authors of another public disclosure in the US to prior to the earliest priority date claimed. The paper/presentation "New Magnetic Material R3T System with Extremely Large Heat Capacities used as Heat Regenerators" Sahashi\*, Tokai\*, Kuriyama, Nakagome (Toshiba) Li, Ogawa and Hashimoto (Tokyo Institute of Tech), include two co-inventors of the '765 as co-authors. Figure 7 and the discussion on pages 1180-1181, Er<sub>3</sub>Ni teach shiny spheres and a rotating disk method of production as shown in the '765 patent.

59. Toshiba never cited the 1989 paper/presentation at conference during prosecution of the '765 patent, even though two of the authors/presenters (out of six on the reference) were co-inventors (out of four) on this patent. At the very least, this paper would have been relevant to patentability as (a) publication by others before foreign filing date; and (b) evidence of invention by other than named four inventors. Upon information and belief, given that two of the four co-inventors of the patent knew of the paper and its materiality to the patentability of the inventions claimed, their failure to disclose their own highly relevant paper was an intentional deception of the Patent Office.

60. The inventors' deception of the Patent Office started with the failure to cite their own papers, but continued throughout the prosecution of the '765 patent.

61. Toshiba filed an information disclosure statement October 10, 1990 with "Statement of Relevance" describing certain references, but by different numbers than on

Japanese documents filed. No dates were provided so examiner lined out all but one on June 11, 1991 indicating that the examiner had not considered any of the cited references.

62. Despite the fact that most or all of the references were Toshiba Japanese patent applications, so that ascertaining the relevant dates and re-filing information disclosure statement would have been simple matter of checking internal documents, Toshiba made no attempt to correct the document

63. On March 13, 1992, Toshiba filed another information disclosure statement and supplied an EPO search summary, but not the actual report or the references that would have been received at the same time. The search summary listed five "Y" references, which means that each of the references was considered invalidating to the claims. Despite the fact that Toshiba would have received copies of the references with the EPO search report, Toshiba wrote that to the US patent office stating that "copies are not readily available" and did not provided copies of the references that the EPO had determined were invalidating to the same or similar claims on file at the US patent office.

64. Upon information and belief, Toshiba knew or should have known these references were relevant to patentability - the EPO said so - but chose not to correct IDS or supply references, instead said they were "not readily available". The statement that the references were "not readily available" was false because (a) they were all published patent applications, some with US equivalents and therefore could be easily ordered inexpensively from the patent offices or many commercial services; (b) at least two references were Toshiba's own; and (c) the EPO would have supplied copies of the references with the search report.

Upon information and belief, Toshiba intentionally withheld highly material documents within its possession from the US Patent Office.

65. Admitted prior art figure 10B photo shows mostly spheres. The examiner cited this figure, and Toshiba argued that although the picture seemed to show spheres, there were "many rod-like particles" and >70% within cited <5:1 range could not be produced by that method. However, Toshiba provided no proof of this assertion or photographs showing the true percentages of spheres versus out-of-range particles and did not amend the claims to include the method they had relied upon in that assertion.

66. Upon information and belief, the US examiner did not challenge the veracity of the statements made by Toshiba, however, the EPO was not so passive when Toshiba made similar arguments during the EPO opposition. They evaluated the actual data submitted by Toshiba regarding the aspect ratio of the materials and stated:

The evaluation of the contents of document D1, however, clearly shows that the authors of D1 have aspired to produce, to the highest extent possible, a uniform and spherical powder distribution or, more specifically, spherical particles having an aspect ratio close to 1 and a size ranging from a few  $\mu\text{m}$  up to a few hundred  $\mu\text{m}$ . It is, therefore, close at hand to stipulate a proportion of 70%, 80% or even 90% of particles having the claimed size and an aspect ratio not greater than 5 or, more preferably, not greater than 2 or even 1.3 since this is exactly what is aimed at by the process known from D1 and by a skilled person putting into practice this process. Even in case that the desired powder distribution and size is not immediately achieved by plasma spraying, it could, for instance, be obtained simply by classifying the powder known from D1. Apart from this general teaching, document D1 further comprises more detailed technical information in the exemplifying figures. The appellant itself has determined the size and aspect ratio of 21 individual particles shown in D1, Figure 3. As set out in Exhibit I,

Table R1, enclosed with the appellant's statement of the grounds of appeal, the major diameter of the particles varies between about 60 to about 200  $\mu\text{m}$ , and the aspect ratio of the majority of the particles is close to about 1.1 or less, with 2.93 being the highest value of all tested samples. ... there is nothing in document D1 for concluding or implying that the mass-produced particles depicted in both Figures 3 and 4 should not be rated as being a fair representation of the powder obtained by the high pressure plasma spraying and quenching method resorted to in this document. Hence, the limiting technical features given in claim 1 of the main request (*equivalent to claim 1 of '765*) ... amount to nothing more than what is aimed at by a person skilled in the art and by the authors of document D1. Consequently the subject matter of claim 1 according to the main request ... does not involve an inventive step. (*See page 9 of EPO decision on Appeal of Opposition decision finding claims not to be patentable over this reference.*)

67. By Toshiba's own measurement the highest aspect ratio was 2.93 of the tested samples. Upon information and belief, Toshiba's arguments during prosecution of the '765 patent indicated that it was not possible to produce >70% spheres within cited the <5:1 range was intentionally false and made to deceive the patent examiner into allowing a patent claim that covered the admitted prior art shown in Figure 10 of the '765 patent.

68. In its attempts to enforce the '765 patent against Cryomech, Defendants go even further and argue that even grain material that does not even appear spherical infringes the claims of the '765 patent.

69. As a result of the acts and allegations described in this complaint, there exists a justiciable controversy between plaintiff and the defendants as to the validity of the claims of the '765 patent to warrant the issuance of a declaratory judgment.

70. A judicial declaration is necessary and appropriate so that Cryomech and Cryomech's customers may proceed with their respective businesses without continued threat of patent infringement from the Defendants.

**Count III – Declaration of Unenforceability of U.S. Patent No. 5,186,765**

71. Plaintiff repeats each and every allegation contained in paragraphs "1" through "70" as if fully set forth herein.

72. Based upon that set forth in this pleading the '765 patent is unenforceable due to inequitable conduct.

73. By virtue of inequitable conduct set forth in this pleading during the prosecution of the '765 patent, the Court should find this case exceptional and award Plaintiff its attorney's fees and costs under 35 U.F.C. § 285.

74. The '765 patent was obtained through inequitable conduct and is therefore unenforceable. A justiciable controversy exists among the parties as the enforceability of said patent.

**Count IV - Declaration of Non-Infringement of U.S. Patent No. 5,449,416**

75. Plaintiff repeats each and every allegation contained in paragraphs "1" through "74" as if fully set forth herein.

76. Cryomech has not infringed and does not infringe, directly or indirectly, any valid and enforceable claim of the '416 patent.

77. As a result of the acts and allegations described in the foregoing paragraphs, there exists a justiciable controversy exists between plaintiff and the defendants as to the infringement of the '416 patent to warrant the issuance of a declaratory judgment.

78. A judicial declaration is necessary and appropriate so that Cryomech and Cryomech's customers may proceed with their respective businesses without continued threat of patent infringement from the Defendants.

**Count V - Declaration of Invalidity of U.S. Patent No. 5,449,416**

79. Plaintiff repeats each and every allegation contained in paragraphs "1" through "78" as if fully set forth herein.

80. The '416 patent is invalid for failure to meet one or more of the conditions of patentability and/or otherwise comply with 35 U.S.C. §§ 100 et seq. 101, 102, 103, 112 and 132.

81. The claims of the '416 patent were and are invalid and void because, *inter alia*, the subject matter was not novel at the time of its alleged invention.

82. The claims of the '416 patent were and are invalid and void because, *inter alia*, the differences between the subject matter sought to be patented therein and the prior art are such that the subject matter as a whole would have been obvious, as of the earliest date that the applicants for said patent are entitled to rely upon as the date of their alleged invention, to a person having ordinary skill in the art to which said subject matter pertains.

83. The claims of the '416 patent were and are invalid because, *inter alia*, the inventors thereof were not the original or first inventor of the alleged improvements described



and claimed therein and that the alleged improvements, in all material and substantial respects, were invented, known to and used by others in this country before the alleged invention or discovery, were patented and described in printed publications in this and foreign countries before the alleged invention or discovery thereof or more than one year prior to the application for said patent.

84. The claims of the '416 patent were and are invalid and void because, *inter alia*, the claims do not particularly point out the subject matter which the applicant regards as his invention and the breadth of the claims asserted by Defendants are not supported by an adequate written description that enables one of ordinary skill in the art to practice the invention as claimed.

85. Essentially a claim combining the limitations of the main independent claim in the '765 patent and the '416 patent was granted as claim 2 in an EPO patent EP-B1-O 411 591 that claimed priority to the same Japanese patent application (JP 1-196870) as the '416 patent.

86. The decision on appeal held that the claims at issue in the EPO (basically, main claims in the '765 and its divisional '416) were not patentable, absent a method of manufacture restriction. The claims corresponding to the current claims in the '765 patent and '416 patent were all held to be unpatentable in view of the Invalidating Reference cited by Sumitomo. Toshiba significantly amended the claims to recite additional limitations and the amended claims were allowed.

87. Upon information and belief, Toshiba could have filed for reissue or reexamination of the '416 patent within the US to include the limitations required by the EPO, but chose not to do so, despite EPO determination that the claims as issued were not patentable.

88. The Invalidating Reference included five authors, two of which were listed as two of the four co-inventors of the '416 patent. Upon information and belief, the co-inventors that were also authors of the Invalidating Reference were aware of the publication well prior to the earliest priority date of the '416 patent.

89. Upon information and belief, at no time during prosecution of the '416 patent did any of the inventors cite the Invalidating Reference to the Patent Office. Upon information and belief, given that two of the four co-inventors of the patent knew of the paper and its materiality to the patentability of the inventions claimed, their failure to disclose their own highly relevant paper was an intentional deception of the Patent Office.

90. In addition to the Invalidating Reference, two of the listed co-inventors of the '416 patent were also co-authors of another public disclosure in the US to prior to the earliest priority date claimed. The paper/presentation "New Magnetic Material R3T System with Extremely Large Heat Capacities used as Heat Regenerators" Sahashi\*, Tokai\*, Kuriyama, Nakagome (Toshiba) Li, Ogawa and Hashimoto (Tokyo Institute of Tech), include two co-inventors of the '765 as co-authors. Figure 7 and the discussion on pages 1180-1181, Er<sub>3</sub>Ni teach shiny spheres and a rotating disk method of production as shown in the '416 patent.

91. Upon information and belief, Toshiba never cited the 1989 paper/presentation at conference during prosecution of the '416 patent, even though two of the authors/presenters (out of six on the reference) were co-inventors (out of four) on this patent. Upon information and belief, at the very least, this paper would have been relevant to patentability as (a) publication by others before foreign filing date; and (b) evidence of invention by other than named four inventors. Upon information and belief, given that two of the four co-inventors of the patent knew

of the paper and its materiality to the patentability of the inventions claimed, their failure to disclose their own highly relevant paper was an intentional deception of the Patent Office.

92. Upon information and belief, the inventors' deception of the Patent Office started with the failure to cite their own papers, but continued throughout the prosecution of the '416 patent.

93. On December 21, 1992 while processing the '416 patent, Toshiba filed the same information disclosure statements that had been previously filed (on October 10, 1990 and March 13, 1992) during prosecution of the '765 patent with "Statement of Relevance" describing certain references, but by different numbers than on Japanese documents filed. Upon information and belief, no dates were given, so the examiner lined out the references again indicating that the examiner had not considered any of the cited references.

94. On May 26, 1994, Toshiba files some Japanese references with different numbers than the previously filed information disclosure statement.

95. Upon information and belief, Toshiba did not provide the actual EPO search report or the references that would have been received at the same time. The search summary listed five "Y" references, which means that each of the references was considered invalidating to the claims. Upon information and belief, despite the fact that Toshiba would have received copies of the references with the EPO search report, Toshiba wrote that to the US patent office stating that "copies are not readily available" and did not provided copies of the references that the EPO had determined were invalidating to the same or similar claims on file at the US patent office.

96. Upon information and belief, Toshiba knew these references were relevant to patentability - the EPO said so - but chose not to correct IDS or supply references, instead said they were "not readily available." Upon information and belief, the statement that the references were "not readily available" was false because (a) they were all published patent applications, some with US equivalents and therefore could be easily ordered inexpensively from the patent offices or many commercial services; (b) at least two references were Toshiba's own; and (c) the EPO would have supplied copies of the references with the search report. Upon information and belief, Toshiba intentionally withheld highly material documents within its possession from the US Patent Office.

97. In its attempts to enforce the '416 patent against Cryomech, Toshiba goes even further and argues that even grain material that does not even appear spherical and is extremely rough infringes the claims of the '416 patent.

98. As a result of the acts and allegations described in this complaint, there exists a justiciable controversy exists between plaintiff and the defendants as to the validity of the claims of the '416 patent to warrant the issuance of a declaratory judgment.

99. A judicial declaration is necessary and appropriate so that Cryomech and Cryomech's customers may proceed with their respective businesses without continued threat of patent infringement from the Defendants.

**Count VI – Declaration of Unenforceability of U.S. Patent No. 5,449,416**

100. Plaintiff repeats each and every allegation contained in paragraphs "1" through "99" as if fully set forth herein.

101. Based upon that set forth in this pleading the '416 patent is unenforceable due to inequitable conduct.

102. By virtue of inequitable conduct set forth in this pleading, during the prosecution of the '416 patent, the Court should find this case exceptional and award Plaintiff its attorney's fees and costs under 35 U.S.C. § 285.

103. The '416 patent was obtained through inequitable conduct and is therefore unenforceable. A justiciable controversy exists among the parties as the enforceability of said patent.

#### **Count VII - Declaration of Non-Infringement of U.S. Patent No. 6,197,127**

104. Plaintiff repeats each and every allegation contained in paragraphs "1" through "103" as if fully set forth herein.

105. Cryomech has not infringed and does not infringe, directly or indirectly, any valid and enforceable claim of the '127 patent.

106. Cryomech does not perform vibration testing of the regenerator material used in its cryogenic coolers, nor does it select regenerator material wherein 1% of the material or less was destroyed when a simple harmonic oscillation of a maximum acceleration of  $300\text{m/s}^2$  was applied to heat regenerating particles  $1 \times 10^6$  times.

107. Cryomech does not sell a Gifford-McMahon style cryogenic cooler that uses rare earth regenerator material.

108. Cryomech sells pulse tube style cryogenic coolers that use rare earth regenerator materials.

109. Regenerator materials in pulse tube style cryogenic coolers are not subject to the vibration forces described in the '127 patent that are inherent in Gifford-McMahon style cryogenic coolers during regular operation of the cooler.

110. As a result of the acts and allegations described in this complaint, there exists a justiciable controversy exists between plaintiff and the defendants as to the infringement of the '127 patent to warrant the issuance of a declaratory judgment.

111. A judicial declaration is necessary and appropriate so that Cryomech and Cryomech's customers may proceed with their respective businesses without continued threat of patent infringement from the Defendants.

#### **Count VIII - Declaration of Invalidity of U.S. Patent No. 6,197,127**

112. Plaintiff repeats each and every allegation contained in paragraphs "1" through "111" as if fully set forth herein.

113. The '127 patent is invalid for failure to meet one or more the conditions of patentability and/or otherwise comply with 35 U.S.C. §§ 100 et seq. 101, 102, 103, 112 and 132.

114. The claims of the '127 patent were and are invalid and void because, *inter alia*, the subject matter was not novel at the time of its alleged invention.

115. The claims of the '127 patent were and are invalid and void because, *inter alia*, the differences between the subject matter sought to be patented therein and the prior art are such

that the subject matter as a whole would have been obvious, as of the earliest date that the applicants for said patent are entitled to rely upon as the date of their alleged invention, to a person having ordinary skill in the art to which said subject matter pertains.

116. The claims of the '127 patent were and are invalid because, *inter alia*, the inventors thereof were not the original or first inventor of the alleged improvements described and claimed therein and that the alleged improvements, in all material and substantial respects, were invented, known to and used by others in this country before the alleged invention or discovery, were patented and described in printed publications in this and foreign countries before the alleged invention or discovery thereof or more than one year prior to the application for said patent.

117. The claims of the '127 patent were and are invalid and void because, *inter alia*, the claims do not particularly point out the subject matter which the applicant regards as his invention and the breadth of the claims asserted by Defendants are not supported by an adequate written description that enables one of ordinary skill in the art to practice the invention as claimed.

118. The claims as originally filed in the application that led to the '127 patent, were originally rejected by the United States Patent Office under 35 U.S.C. § 112 as indefinite and under 35 U.S.C. § 103 as being obvious over either the Saito or Arai references (original claims 1-12) and further in view of Toshiba's own specification (original claims 13-16).

119. In arguing for the allowance of the claims, Toshiba amended the claims and made the following representations in its response dated June 30, 2000:

The difference between the manufacturing methods of the present invention and those of Arai and Saito depend on whether 'a vibration test in which a simple harmonic oscillation of a maximum acceleration of  $300\text{m/s}^2$  is applied  $1 \times 10^6$  times' is implemented or not. **The heat regenerating material of the present invention can be obtained by performing these claimed steps** while Arai and Saito do not disclose or suggest anything about the test and select steps as claimed in the present invention.

Additionally, neither Arai nor Saito disclose or suggest improving the reliability of the heat regenerating aggregate to mechanical vibration or acceleration, as claimed. Accordingly, when the vibration test that the present invention provides is implemented, the heat regenerating aggregate has improved reliability to mechanical vibration or acceleration. The present heat regenerating material is obtained after the test and select steps enables to largely improve the reliability of the heat regenerating aggregate to the mechanical vibration or the acceleration. Arai and Saito do not disclose or even remotely suggest this claimed limitation. (Emphasis added, pages 8-9 of June 30, 2000 response).

120. After characterizing the test and select steps in the claims as the critical limitation differentiating the claims over the prior art, the amended claims were allowed.

121. In each example discussed in the '127 patent, the starting material was prior art regenerator material that was divided into lots to be tested. 80% of the lots survived the testing, and 20% did not (see Comparative Examples 1-3 provided in the '127 patent).

122. The average destruction rate of all particles tested in Comparative Examples 1-3 was less than 1%. Assuming all the lots were mixed, the mixture would presumably meet the claim limitation.

123. Based on testing results provided in the '127 patent, anyone testing prior art regenerator material would expect that 80% of individual lots and 100% of mixed lots would



survive the testing procedure and selection criteria recited in the '127 patent, even if the prior regenerator was not tested prior to being used in a cryogenic cooler.

124. Defendants have alleged that the regenerator materials used in cryogenic coolers sold by Cryomech meet the limitations of the claims of the '127 patent even though Cryomech has not performed the recited test and select step recited in all the claims of the '127 patent.

125. Upon information and belief, Toshiba fraudulently induced the US Patent Office into allowing the '127 patent by arguing that the test and select step recited in all the claims of the '127 patent was a critical and limiting recitation in all the pending claims.

126. As a result of the acts and allegations described in this complaint, there exists a justiciable controversy exists between plaintiff and the defendants as to the validity of the claims of the '127 patent to warrant the issuance of a declaratory judgment.

127. A judicial declaration is necessary and appropriate so that Cryomech and Cryomech's customers may proceed with their respective businesses without continued threat of patent infringement from the Defendants.

#### **Count IX – Declaration of Unenforceability of U.S. Patent No. 6,197,127**

128. Plaintiff repeats each and every allegation contained in paragraphs "1" through "127" as if fully set forth herein.

129. Based upon that set forth in this pleading the '127 patent is unenforceable due to inequitable conduct.

130. By virtue of inequitable conduct set forth in this pleading, during the prosecution of the '127 patent, the Court should find this case exceptional and award Plaintiff its attorney's fees and costs under 35 U.S.C. § 285.

131. The '127 patent was obtained through inequitable conduct and is therefore unenforceable. A justiciable controversy exists among the parties as the enforceability of said patent.

### **EXCEPTIONAL CASE**

132. This is an exceptional case entitling Plaintiff to an award of attorney's fees incurred in connection with the prosecution of this action pursuant to 35 U.S.C. § 285.

### **JURY DEMAND**

132. Plaintiff demands a trial by jury on all issues.

### **PLAINTIFF'S PRAYER FOR RELIEF**

WHEREFORE, Plaintiff requests the following relief:

- (a) That this Court issue a Declaratory Judgment that the Patents-in-Suit and each and every one of the claims made in said Patents-in-Suit are invalid, void, and unenforceable;
- (b) That this Court issue a Declaratory Judgment and that the Plaintiff has not infringed, has not contributory infringed and has not induced others to infringe any of the Patents-in-Suit;

- (c) That the devices sold and manufactured by Plaintiff have not and do not infringe any patents owned by or otherwise enforceable by any of the Defendants;
- (d) An Order declaring that Cryomech is the prevailing party and that this is an exceptional case thereby awarding Cryomech its costs, expenses, disbursements and reasonable attorney's fees pursuant to 35 U.S.C. § 285; and
- (e) That Cryomech have such other and further relief as this Court may deem just and proper.

Dated: March 11, 2011  
Binghamton, New York

s/ James P. O'Brien  
James P. O'Brien, Esq. (Bar Roll No.: 102277)  
COUGHLIN & GERHART, LLP  
Counsel for Plaintiff, Cryomech, Inc.  
P.O. Box 2039  
Binghamton, New York 13902-2039  
(607) 723-9511  
Fax: 607-723-1530  
jobrien@cglawoffices.com

and:

s/ Christopher A. Michaels  
Christopher A. Michaels, Esq. (Bar Roll #: 508904)  
BROWN & MICHAELS, P.C.  
400 M&T BANK BUILDING  
118 North Tioga Street  
Ithaca, New York 14850  
(607) 256-2000  
Fax: 607-256-3628  
michaels@bpmlegal.com